CLAIMS

1. Method for opening carbon nanotubes, characterized in that it comprises two oxidation stages, the first in liquid phase in a concentrated acid, the second in gaseous phase.

2. Method according to claim 1, characterized in that the carbon nanotubes are multiwall carbon nanotubes.

3. Method according to claim 2, characterized in that the concentrated acid is nitric acid, preferably used in excess.

4. Method according to one of claims 2 or 3, characterized in that 1 g of carbon nanotubes in 0.5 litres to 2 litres of concentrated nitric acid at 60-75% by weight is used, in particular, 1 litre of nitric acid at a concentration of the order of 68-70% by weight.

5. Method according to any one of claims 2 to 4, characterized by a heating at reflux, under stirring.

6. Method according to any one of claims 1 to 5, characterized in that said second oxidation stage in gaseous phase is an oxidation of said nanotubes with carbon dioxide at low temperature.

7. Method according to claim 6, characterized by the treatment of carbon nanotubes with said carbon dioxide at 500 to 600°C, for 1 to 2 hours, in particular from 500 to 550°C, for 1 hour to 1 hour 40 minutes.

8. Method according to any one of claims 1 to 7, characterized in that it comprises, between said first oxidation stage in liquid phase and said second oxidation stage in gaseous phase, an intermediate stage of filtration and washing of said open nanotubes, in particular with distilled water.

9. Use of nanotubes obtained by implementation of the method according to any one of claims 1 to 8, for the storage energy, for the storage or filtration of gasses and/or for the production of a catalyst support.